

AMENDMENTS TO THE CLAIMS

This listing of claims supersedes all prior versions and listings of claims in this application:

LISTING OF CLAIMS:

1. (Currently Amended) A headlamp for a vehicle, which forms a light distribution pattern having a horizontal cutoff line on an upper end, comprising a plurality of first light irradiation units that form the horizontal cutoff line by light, each of the first light irradiation units comprising:

a first light source formed by a first semiconductor light emitting unit having a first substantially rectangular light emitting chip and facing forward such that one side of the first light emitting chip extends in a horizontal direction; and

a first projection lens located in front of the first light source and serving to project an image of the first light source as an inverted image forward from the respective first light irradiation units,

wherein a center of the first substantially rectangular light emitting chip is shifted away from an optical axis of the first projection lens.

2. (Previously Presented) The headlamp according to claim 1, wherein the first substantially rectangular light emitting chip of the first light source is relatively long in a horizontal direction.

3. (Previously Presented) The headlamp according to claim 1, further comprising a plurality of second light irradiation units that form an oblique cutoff line that rises from the horizontal cutoff line at an angle, each of the second light irradiation units comprising:

a second light source formed by a second semiconductor light emitting unit having a second substantially rectangular light emitting chip and facing forward such that one side of the second light emitting chip extends in an inclined direction at the angle with respect to the horizontal direction; and

a second projection lens positioned in front of the second light source and serving to project an image of the second light source as an inverted image forward from the respective second light irradiation units.

4. (Previously Presented) The headlamp according to claim 3, wherein a shape of the second light emitting chip of the second light source is substantially rectangular and extends relatively long in the inclined direction at the angle.

5. (Currently Amended) A headlamp which forms, on an upper end, a light distribution pattern having an oblique cutoff line extended at an angle with respect to a horizontal direction,

comprising a plurality of light irradiation units that form the oblique cutoff line, each of the light irradiation units comprising:

a light source formed by a semiconductor light emitting unit having a substantially rectangular light emitting chip and provided to face forward such that one side of the light emitting chip is extended in an inclined direction at the angle with respect to the horizontal direction,; and

a projection lens positioned in front of the light source and serving to project an image of the light source as an inverted image forward from the respective light irradiation units,

wherein a center of the substantially rectangular light emitting chip is shifted away from an optical axis of the projection lens.

6. (Previously Presented) A headlamp for forming a light distribution pattern, comprising a first lighting system comprising:

at least one first light emitting unit that is substantially rectangular and faces forward; and

at least one corresponding first projection lens that projects an image of light generated by said at least one first light emitting unit, wherein:

a center of the at least one first light emitting unit is shifted away from an optical axis of the at least one corresponding first projection lens; and

said image is substantially inverted.

7. (Previously Presented) The headlamp of claim 6, further comprising a plurality of said at least one first light emitting units and a plurality of said at least one corresponding first projection lenses, wherein:

a first one of the at least one first light emitting units has a first focal length with respect to a first one of the at least one corresponding first corresponding projection lens lenses; and

a second type one of the at least one first light emitting unit having units has a second focal length with respect to a second one of the at least one corresponding first projection lenses; and

said first focal length is greater than said second focal length.

8. (Original) The headlamp of claim 6, further comprising a lens cover that is translucent.

9. (Previously Presented) The headlamp of claim 6, wherein said at least one first light emitting unit is at least one of (a) inclined at an angle with respect to a horizontal direction; or (b) positioned to one side and upward from said optical axis.

10. (Currently Amended) The headlamp of claim ~~[[6]]~~ 2, wherein said angle is about 15 degrees.

11. (Previously Presented) The headlamp of claim 6, further comprising a second lighting system comprising:

at least one second light emitting unit that is substantially rectangular and faces forward;
and

at least one second corresponding projection lens that projects substantially inverted light generated by said at least one second light emitting unit,

wherein a center of the at least one second light emitting unit is shifted upward from an optical axis of the at least one second corresponding projection lens.

12. (Previously Presented) The headlamp of claim 11, further comprising a lens cover having a plurality of vertically striped diffusing lens units adjacent to the at least one corresponding second projection lens of said second light system.

13. (Original) The headlamp of claim 11, wherein said first lighting system is positioned below said second lighting system in said headlamp.

14. (Previously Presented) The headlamp of claim 11, further comprising a third lighting system comprising:

at least one third light emitting unit that is substantially rectangular and faces forward;
and

at least one corresponding third projection lens that projects substantially inverted light generated by said at least one third light emitting unit, wherein:

a center of the at least one third light emitting unit is shifted upward and to one side of an optical axis of the at least one corresponding third projection lens; and

said at least one first light emitting unit of said first lighting system is inclined at an angle with respect to a horizontal direction.

15. (Original) The headlamp of claim 14, wherein said third lighting system is vertically positioned below the first lighting system, which is positioned below the second lighting system.

16. (Original) The headlamp of claim 14, wherein said angle is about 15 degrees.

17. (Previously Presented) The headlamp of claim 14, further comprising a plurality of each of said at least one first, second and third light emitting units and a plurality of said at least one corresponding first, second and third projection lenses, wherein:

a first one of the at least one first light emitting units has a first focal length with respect to a first one of the at least one corresponding first projection lenses;

a second one of the at least one first light emitting units has a second focal length with respect to a second one of the at least one corresponding first projection lenses;

a first one of the at least one second light emitting units has a third focal length with respect to a first one of the at least one corresponding second projection lenses;

a second type one of the at least one second light emitting unit in said second lighting system having units has a fourth focal length with respect to a second one of the at least one corresponding second projection lens lenses; and

a first one of the at least one third light emitting units has a fifth focal length with respect to a first one of the at least one corresponding third projection lenses,

wherein said first focal length is greater than said second focal length, said third focal length is greater than said fourth focal length, and said fifth focal length is less than any of said first through fourth focal lengths.

18. (Cancelled)

19. (Currently Amended) The headlamp according to claim ~~[[18]]~~ 1, wherein the optical axis of the first projection lens does not pass through the first substantially rectangular light emitting chip.

20. (Previously Presented) The headlamp according to claim 1, wherein the first projection lens is plano-convex.